

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
10 February 2005 (10.02.2005)

PCT

(10) International Publication Number
WO 2005/011940 A1

(51) International Patent Classification⁷: **B27K 5/04, 3/15**

(21) International Application Number:
PCT/CA2004/001442

(22) International Filing Date: 2 August 2004 (02.08.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/491,526 1 August 2003 (01.08.2003) US

(71) Applicant (for all designated States except US): **HYDRO-QUEBEC** [CA/CA]; 75, boul. Rene-Levesque West, Montreal, Québec H2Z 1A4 (CA).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BESNER, André** [CA/CA]; 5570 Wilbroad-Paquin street, Montreal, Québec H1T 3Z2 (CA). **LABRECQUE, Jean-François** [CA/CA]; 4361 De Bordeaux street, Montreal, Québec H2H 1Z6 (CA).

(74) Agent: **OGILVY RENAULT**; Suite 1600, 1981 McGill College Avenue, Montreal, Québec H3A 2Y3 (CA).

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **PROCESS FOR TREATING ELEMENTS MADE FROM NON-DRIED WOOD**

(57) **Abstract:** A process for the treatment of wooden elements, said process comprising the following steps: conditioning said wooden elements to reduce their moisture content; and a) performing one of the following sequences of steps selected from the group consisting of at least the sequence of steps b1) to b4) or at least the sequence of steps bb1) to bb2); said sequence of step b1) to b4) at least comprising: b1) impregnating the wooden elements obtained from step a) with at least one wood preservative, b2) heating the wooden elements obtained from step b1) at a temperature of at least 51° C to fix said wood preservative(s) in said wooden elements, b3) impregnating the wooden elements obtained from step b2) with a solution comprising polymerizable reactive groups, identical or different, that can form a polymer under polymerizing condition, and b4) subjecting the wooden elements obtained from step b3) to polymerizing condition to polymerize said reactive group(s); said sequence of steps bb1) to bb2) at least comprising: bb1) impregnating the wooden elements obtained from step a) with a mixture of at least one wood preservative and polymerizable reactive groups, identical or different, that can form a polymer under polymerizing condition, and bb1) heating the wooden elements obtained from step bb2) at a temperature of at least 51°C to fix the wood preservative(s) and to polymerize said reactive groups. The treated wooden elements so obtained and their uses.

BEST AVAILABLE COPY